



**STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF STATE PLANNING COORDINATION**

June 25, 2014

Mr. Ring Lardner  
Davis Bowen & Freidel  
23 N Walnut Street  
Milford, DE 19963

RE: PLUS Review 2014-05-03, Harbor Point

Dear Mr. Lardner:

Thank you for meeting with State agency planners on May 28, 2014 to discuss the proposed plans for Harbor Point. According to the information received, you are seeking a subdivision review for the development of 69 residential units on 108 acres in Sussex County.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. **The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.**

**Strategies for State Policies and Spending**

- This project is located in Investment Level 3 according to the Strategies for State Policies and Spending. This site is also located in the Sussex County Growth Zone. Investment Level 3 reflects areas where growth is anticipated by local, county, and state plans in the longer term future, or areas that may have environmental or other constraints to development. State investments may support future growth in these areas, but please be advised that the State has other priorities for the near future. The State encourages you to design the site with respect for the environmental features which are present.

**Code Requirements/Agency Permitting Requirements**

State Historic Preservation Office – Contact Terrence Burns 736-7404

- Since SHPOs initial review of this PLUS project (then under the name “Point Farm”) in 2013, additional information has come to light concerning previous cultural resource

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investigations of the project area. SHPO has confirmed that there are recorded archaeological sites within the area proposed for development. Further discussion is needed to fully assess the findings of these investigations and their implications for the development's impacts on cultural resources.

- As described in a 1965 report, an earlier archaeological survey recovered Native American artifacts from several locations on the parcel; SHPO has assigned an archaeological site number (S12268, 7S-D-096) to this area. Subsequent work conducted in the early 1990s found additional such material, as well as historic period artifacts. At that time, the investigator apparently considered these finds to be part of a known archaeological site – called the Russell Site (S00527, 7S-D-007) – located to the south. The investigator also identified another site with both Native American and historic period artifacts. A section of the Beebe Site (S-9146, 7S-D-073), which was investigated in the late 1990s for the Canary Creek development, extends into the subject area. Both the Russell and Beebe Sites have been determined eligible for listing in the National Register of Historic Places.
- Recently, another investigation was conducted, apparently on behalf of the applicant. Our preliminary review of the report indicates that the work included a summary of previous findings, further research on the history of the parcel, and a field survey. Scattered Native American and historic period artifacts were found on the parcel. The investigator concluded that these finds were not significant. SHPO has several questions about some aspects of this work. At this point, there is not sufficient information to concur with the report's conclusion. SHPO will provide the applicant with more detailed comments on the report for consideration.
- It must be noted that all of the archaeological investigations, including the most recent one, conducted on the parcel to date are considered reconnaissance-level work, consisting primarily of surface inspections. This level of work is often sufficient to identify sites, but is not designed to fully assess their boundaries or significance. Based on the information available, it does not appear that the area has been subject to sufficient sub-surface testing to identify intact archaeological features below the plow level. Such features may include unmarked human remains. The potential for burials to be present on the subject parcel must be taken seriously, considering that the Russell Site proper, just south of this area, did have a burial. Therefore, SHPO reiterates its previous cautions to the applicant concerning Chapter 54 of Title 7 of the Delaware Code, which pertains to Delaware's Unmarked Human Burials and Human Skeletal Remains Law, and request further consultation with the applicant on this matter.

Abandoned or unmarked family cemeteries are very common in the State of Delaware. They are usually in rural or open space areas, and sometimes near or within the boundary of an historic farm site. Even a marked cemetery can frequently have unmarked graves or burials outside of the known boundary line or limit. Disturbing unmarked graves or burials triggers the Delaware's Unmarked Human Burials and Human Skeletal Remains

Law ([Delaware Code Title 7, Chapter 54](#)), and such remains or discoveries can result in substantial delays while the procedures required under this law are carried out. If there is a discovery of any unmarked graves, burials or a cemetery, it is very costly to have them archaeologically excavated and the burials moved. In the event of such a discovery, the Division of Historical & Cultural Affairs also recommends that the plans be re-drawn to leave the full extent of the cemeteries or any burials on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with the landowner association or development. If you would like more information pertaining to unmarked human remains or cemeteries, please check the following websites for additional information: [www.history.delaware.gov/preservation/umhr.shtml](http://www.history.delaware.gov/preservation/umhr.shtml) and [www.history.delaware.gov/preservation/cemeteries.shtml](http://www.history.delaware.gov/preservation/cemeteries.shtml).

- If there is any federal involvement with the project, in the form of licenses, permits, or funds, the federal agency, often through its client, is responsible for complying with Section 106 of the National Historic Preservation Act (36 CFR 800) and must consider the project's effects on any known or potential cultural or historic resources. Owners and developers who may plan to apply for an Army Corps of Engineers permit or for federal funding, such as HUD or USDA grants, should be aware of the National Historic Preservation Act of 1966 (as amended). Regulations promulgated for Section 106 of this Act stipulate that no ground-disturbing or demolition activities should take place before the Corps or other involved federal agency determines the area of potential effect of the project undertaking. These stipulations are in place to allow for comment from the public, the Delaware State Historic Preservation Office, and the Advisory Council for Historic Preservation about the project's effects on historic properties. Conducting construction activities without adherence to these stipulations may jeopardize the issuance of any federal permit or funds. If you need further information or additional details pertaining to the Section 106 process and the Advisory Council's role, please review the Advisory Council's website at [www.achp.gov](http://www.achp.gov).

**SHPO requests further consultation with the applicant and their archaeological consultant, to clarify aspects of the recent survey and discuss the potential need for further investigation or monitoring. At a minimum, SHPO recommends that the area of the Beebe Site be avoided, with no grading or ground-disturbance in that part of the parcel.**

Department of Transportation – Contact Bill Brockenbrough 760-2109

- The proposed development meets DelDOT's volume-based criteria, found in Section 2.3.2 of the Standards and Regulations for Subdivision Streets and State Highway Access, for recommending that a Traffic Impact Study (TIS) be required (400 vehicle trips per day or 50 vehicle trips per hour). The developer's engineer submitted a TIS on March 7, 2014 and they provided comments on March 27, 2014. A copy of that letter is enclosed.

- Presently, Park Road is maintained by the City of Lewes from New Road to Samantha Drive and by the Department of Natural Resources and Environmental Control (DNREC) from Samantha Drive to Pilottown Road. DNREC has a project to improve part of the section they maintain, from the causeway to Pilottown Road. As DelDOT understands it, the developer seeks to have maintenance responsibility for Park Road between Samantha Drive and the causeway transferred to DelDOT and to improve the road to DelDOT standards. DelDOT expects the City of Lewes to request responsibility for Park Road from New Road to the causeway, and also from the causeway to Pilottown Road, once the road is improved. The following comments assume that the transfer of maintenance responsibility from DNREC will occur:

- The site entrance must be designed in accordance with DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access, which is available at [http://www.deldot.gov/information/pubs\\_forms/manuals/subdivisions/pdf/Subdivision\\_Manual\\_Revision\\_1\\_proposed\\_060110.pdf](http://www.deldot.gov/information/pubs_forms/manuals/subdivisions/pdf/Subdivision_Manual_Revision_1_proposed_060110.pdf).

Further in this regard, please be advised that DelDOT has advertised for comment a comprehensive revision of the Standards and Regulations. The comment period runs through June 30 and DelDOT could adopt this revision as soon as August 2014. Implementation guidance has not been developed but DelDOT recommend that the developer's engineer become familiar with the proposed changes and assess whether any of them could be relevant to this project. Information on the proposed revision is available in the Register of Regulations and at [http://www.deldot.gov/information/pubs\\_forms/revisions\\_to\\_ASR/index.shtml](http://www.deldot.gov/information/pubs_forms/revisions_to_ASR/index.shtml).

- In accordance with 17 Del. Code §132, the design and construction of the improvements to Park Road would be subject to DelDOT's review and inspection.

The improvements to Park Road must be designed in accordance with DelDOT's Road Design Manual and Design Guidance Memoranda, which are, respectively, available at [http://www.deldot.gov/information/pubs\\_forms/manuals/road\\_design/index.shtml](http://www.deldot.gov/information/pubs_forms/manuals/road_design/index.shtml) and [http://www.deldot.gov/information/pubs\\_forms/manuals/dgm/index.shtml](http://www.deldot.gov/information/pubs_forms/manuals/dgm/index.shtml).

More specifically, Park Road must meet DelDOT standards for Local Roads, including 11-foot wide travel lanes, 5-foot wide shoulders and an overlay of the entire pavement width to provide an adequate pavement section.

- In accordance with Section 3.6.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, DelDOT will require the applicant to furnish and place right-of-way monuments along Park Road between Samantha Drive and the causeway. DelDOT recommends that monuments be furnished and placed along the subdivision street rights-of-way as well.

- In accordance with Section 5.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, a sight distance triangle is required for the site entrance and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at <http://www.deldot.gov/information/business/subdivisions/Intersection-Sight-Distance.xls>.
- In accordance with Section 3.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, a site plan shall be prepared prior to issuing “Letter of No Objection”. The following information will be required for the “Letter of No Objection” review:
  - Copy of the Initial Stage Fee Calculation Form
  - Copy of the Initial Stage Review Fee
  - Gate-Keeping Checklist – Site Plan
  - Design Checklist – Record Plan\*
  - Owners and Engineer’s name and e-mail address
  - Three (3) paper sets of the Record Plan
  - Conceptual Entrance Plan
  - CD with a pdf of the Site Plan

\*For the design checklist for the site plan, please refer to the Standards and Regulations for Subdivision Streets and State Highway Access, Appendix D, Plan Review Checklist, pages D-2 and D-3.

- Referring to Section 4.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, an entrance plan shall be prepared prior to issuing entrance approval. The following information will be required for Entrance Plan review;
  - Copy of the Construction Stage Fee Calculation Form
  - Copy of the Construction Review Fee
  - Gate-Keeping Checklist – Entrance Plan
  - Design Checklist – Entrance Plan\*\*
  - Three (3) paper sets of the Entrance Plan
  - SWM Report and Calculations (if applicable)
  - CD with a pdf of the Entrance Plan

\*\*For the design checklist for the entrance plan, please refer to the Standards and Regulations for Subdivision Streets and State Highway Access, Appendix D, Plan Review Checklist, pages D-9 and D-13.

## **Wetlands**

- State regulated wetlands do not appear to be directly impacted on this portion of the property based on a review of the State wetland maps. However, DNREC recommends a Jurisdictional Determination to be sure wetlands are not physically impacted. Also, a review of County setback requirements regarding wetlands will be necessary.
- State regulated wetlands are those wetlands identified on the State's official State Regulated Wetland Maps. State regulated wetlands are located adjacent to this property based on a review of the State wetland maps. Please refer to State Wetland map number 85. Any activity in State regulated wetlands may require a permit from DNREC's Wetlands and Subaqueous Lands Section. There are lots on this parcel that are very close to the mapped wetland line; therefore, any construction in this area should remain clear of impacting the wetlands.
- State regulated subaqueous lands are likely to be located adjacent to this property based on a review of aerial photographs, SWMP maps, Soil Surveys and USGS topographic maps. An on-site inspection by a representative of the Wetlands and Subaqueous Lands Section or an environmental consultant is recommended to determine the limits of jurisdictional State subaqueous lands.

## **Flood Plain and Sea Level Rise**

- A significant portion of the planned development area (including homes and access roads) lies within the mapped 1% and 0.2% annual chance flood zone as mapped by FEMA on the effective Flood Insurance Rate Maps (FIRMs). These FIRMs have been recently updated by FEMA, are currently preliminary, and will become effective in 2015. The updated preliminary FIRMs indicate that the base flood elevation has been reduced, however more of the property has been mapped as a Special Flood Hazard Area, prone to flooding.
- In addition, a significant portion of the planned development area lies within an area that will be subject to direct and permanent inundation from sea level rise. Sea levels in Lewes have risen by about a foot over the past century; this rate of sea level rise is likely to accelerate in the coming decades as a result of global climate change and local subsidence. Accelerated sea level rise will result in permanent flooding of low-lying coastal areas and increased risk of flood damage during storms.
- State maps depicting future inundation risk from sea level rise indicate that approximately half of the upland portion of this site could be inundated by sea level rise by 2100. In the short-term, sea level rise on this parcel, combined with periodic coastal flooding events, may result in repetitive flood damage to homes within this neighborhood and significant difficulties maintaining stormwater and drainage infrastructure. In the long-term, this increased flood and inundation risk could result in costly public and private flood abatement and drainage projects and an eventual abandonment of homes.

- The proposed access road is also located within a mapped floodplain and mapped future sea level rise area. If built at grade, this road will be subject to periodic and increasing flood risk, potentially resulting in evacuation issues for residents and town emergency managers.

Recommendations:

- Lots within flood prone areas should be eliminated.
- Any structure built within a mapped floodplain should be constructed with 18" of freeboard. Any structures that are built within an area mapped as both floodplain and sea level rise zone should be constructed with 18" of freeboard plus additional freeboard to accommodate future sea levels.
- Access roads should be designed to be flood resilient for the entirety of its design life span. This includes ensuring that the roadway functions for the 1% chance flood plus anticipated future sea level rise.

Sea Level Rise maps for the state area available online: <http://de.gov/slrmmap>

FIRM maps for Sussex County are also available online:

<http://maps.riskmap3.com/DE/sussex/>

## TMDLs

- The project is located in the greater Delaware River and Bay drainage area, specifically within the Broadkill River watershed. The TMDL for the Broadkill River watershed calls for a 40% reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 75% reduction in bacteria from baseline conditions.
- A nutrient management plan is required under the *Delaware Nutrient Management law (3 Del. Chapter 22)* for all persons or entities who apply nutrients to lands or areas of open space in excess of 10 acres. This project's open space may exceed this 10-acre threshold. Please contact the Delaware Nutrient Management Program at 739-4811 for further information concerning compliance requirements or view the following web link for additional information: <http://dda.delaware.gov/nutrients/index.shtml>

## Water Supply

- The project information sheets state water will be provided to the project by the City of Lewes Board of Public Works via a public water system. Our records indicate that the project is located within the public water service area granted to Lewes Board of Public Works under Certificate of Public Convenience and Necessity 01-CPCN-07.
- Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

- All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising

### **Sediment and Stormwater Program**

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. Contact the reviewing agency to schedule a project application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. The site topography, soils mapping, pre- and post- development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-2105 for details regarding submittal requirements and fees.

### **Hazardous Waste Sites**

- If it is determined by the Department that there was a release of a hazardous substance on the property in question and the Department requires remediation pursuant to the Hazardous Substance Cleanup Act, the provisions of 7 Del.C., Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware Regulations Governing Hazardous Substance Cleanup shall be followed.

### **Air Quality**

- The applicant shall comply with all applicable Delaware air quality regulations. Please note that the following regulations in Table 1 – Potential Regulatory Requirements may apply to your project:

<b>Table 1: Potential Regulatory Requirements</b>	
<b>Regulation</b>	<b>Requirements</b>
<b>7 DE Admin. Code 1106 - Particulate Emissions from Construction and Materials Handling</b>	Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads. Use covers on trucks that transport material to and from site to prevent visible emissions.
<b>7 DE Admin. Code 1113 – Open Burning</b>	Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year. Prohibit the burning of land clearing debris. Prohibit the burning of trash or building



	materials/debris.
<b>7 DE Admin. Code 1135</b> – Conformity of General Federal Actions to the State Implementation Plan	Require, for any “federal action,” a conformity determination for each pollutant where the total of direct and indirect emissions would equal or exceed any of the de minimus levels (See Section 3.2.1)
<b>7 DE Admin. Code 1141</b> – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products	Use structural/ paint coatings that are low in Volatile Organic Compounds. Use covers on paint containers when paint containers are not in use.
<b>7 DE Admin. Code 1144</b> – Control of Stationary Generator Emissions	Ensure that emissions of nitrogen oxides (NO <sub>x</sub> ), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO <sub>2</sub> ), carbon monoxide (CO), and carbon dioxide (CO <sub>2</sub> ) from emergency generators meet the emissions limits established. (See section 3.2). Maintain recordkeeping and reporting requirements.
<b>7 DE Admin. Code 1145</b> – Excessive Idling of Heavy Duty Vehicles	Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.

For a complete listing of all Delaware applicable regulations, please look at our website:  
<http://www.awm.delaware.gov/AQM/Pages/AirRegulations.aspx>.

Delaware State Fire Marshall’s Office – Contact Duane Fox 739-4394

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation:

- **Fire Protection Water Requirements:**

- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.
- The infrastructure for fire protection water shall be provided, including the size of water mains.
- **Accessibility:**
  - All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from the main thoroughfare must be constructed so fire department apparatus may negotiate it. If a “center island” is placed at an entrance into the subdivision, it shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision.
  - Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
  - Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
  - The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.
  - The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- **Gas Piping and System Information:**
  - Provide type of fuel proposed, and show locations of bulk containers on plan.
- **Required Notes:**
  - Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
  - Name of Water Supplier
  - Proposed Use
  - National Fire Protection Association (NFPA) Construction Type
  - Maximum Height of Buildings (including number of stories)
  - Provide Road Names, even for County Roads

### **Recommendations/Additional Information**

This section includes a list of site specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped (**but in no way required**) that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- Because the proposed development would generate more than 200 vehicle trips per day, the developer should expect a Pre-Submittal Meeting to be required before of plans are submitted for review. Guidance on what will be covered at this meeting and how to prepare for is located at [http://www.deldot.gov/information/business/subdivisions/Pre-Submittal\\_Meeting\\_Requirements.doc](http://www.deldot.gov/information/business/subdivisions/Pre-Submittal_Meeting_Requirements.doc). The form needed to request this meeting is available at [http://www.deldot.gov/information/business/subdivisions/Meeting\\_Request\\_Form.doc](http://www.deldot.gov/information/business/subdivisions/Meeting_Request_Form.doc).
- DelDOT's Shared-Use Path and/or Sidewalk Process policy (available at [http://www.deldot.gov/information/business/subdivisions/SUP\\_Sidewalk\\_Process.pdf](http://www.deldot.gov/information/business/subdivisions/SUP_Sidewalk_Process.pdf)) requires that a path or sidewalk be installed along the State-maintained road frontage of any development in a Level 1 or 2 Investment area, as defined in the Strategies for State Policies and Spending, and along the State-maintained road frontage of any development in a Level 3 or 4 Investment Area that abuts an existing facility. The policy requires some interpretation in this case in that Harbor Point is in Levels 1 and 3 and while it abuts Canary Creek, neither development directly fronts on the State-maintained road that would provide their access. Nonetheless, the applicant should expect a requirement that they provide a 5-foot wide sidewalk along the south side of Park Road from Samantha Drive to the site entrance. DelDOT understands from the applicant that DNREC has already built a 10-foot wide shared use path along the north side of Park Road from Samantha Drive to the beginning of the causeway.
- Be advised that the standard general notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision date of November 26, 2013. The notes can be found at [http://www.deldot.gov/information/business/subdivisions/DelDOT\\_Development\\_Coordination\\_Plan\\_Sheet\\_Notes.doc](http://www.deldot.gov/information/business/subdivisions/DelDOT_Development_Coordination_Plan_Sheet_Notes.doc)

The applicant should expect a requirement that all PLUS and/or TAC comments be addressed prior to submitting record, subdivision or entrance plans for review.

Department of Natural Resources and Environmental Control – Contact Bahareh Van Boekhold 735-3495

- **Soils Assessment**

Based on soils survey mapping update, the Transquaking and Mispillion (TP) soil mapping unit is the main soil mapping unit in the immediate vicinity of the proposed project; DNREC strongly recommends the applicant avoid this mapping unit. TP is a very poorly-drained wetland associated (hydric) soil that is considered to have severe limitations for development (i.e., considered unsuitable). The TP soil mapping unit is indicative of tidal wetland presence.



Figure 1: NRCS soil mapping update in the immediate vicinity of the proposed project

#### **Additional information on TMDLs and water quality**

- In response to concerns about the need for reducing nonpoint source nutrient (nitrogen and phosphorus) and bacterial pollutants to levels sufficient to meet the prescribed TMDL reduction requirements in Delaware's portion of the Broadkill River Basin, a multifaceted and comprehensive process known as a Pollution Control Strategy (PCS) has been developed to enable such reductions. Specifically, a PCS is a combination of best management practices and control technologies that reduce nutrient and bacterial pollutant runoff loading in waters of a given watershed to level(s) consistent with the TMDL(s) reduction levels specified for that watershed. The PCS for the Broadkill River watershed consists of recommendations from the following three areas: Agriculture, stormwater, and wastewater. Additional information about Broadkill River PCS is available from the follow web link: <http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedManagementPlans.aspx>

- DNREC strongly encourages the applicant reduce nutrient and bacterial pollutants through voluntary implementation of the following recommended BMPs:
  - Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements – A Review*. J. Environ. Qual. 23: 878-882.), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all water bodies (including ditches) and wetlands (field delineated and approved by the USACE).
  - Applicant should calculate post-construction surface imperviousness with all forms of created surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, and roads) included in the calculation.
  - The applicant's intention to site an open-water management structure(s) and include it as part of the County's total open space requirements is not considered an acceptable best management practice and is strongly discouraged.
  - DNREC encourages the use of green-technology storm water management (in lieu of open-water management structures) and raingardens as BMPs to reduce nutrient pollutant impacts. Please contact Lara Allison at 739-9939 for further information about siting a raingarden(s) in this parcel.
  - Since this project will create additional impervious surface that will increase the probability for increased pollutant load runoff to adjoining streams and wetlands, DNREC strongly encourages the use of pervious paving materials (instead of conventional asphalt and concrete) to mitigate the negative impacts from pollutant runoff.
  - DNREC encourages the use of rain gardens, and green-technology storm water management structures (in lieu of open-water management structures) as BMPs to reduce nutrient pollutant impacts.
  - The applicant should voluntarily assess nutrient and bacterial pollutant loading at the preliminary project design phase. To this end, the Watershed Assessment Section has developed a methodology known as the "Nutrient Load Assessment protocol." The protocol is a tool used to assess changes in nutrient loading (e.g., nitrogen and phosphorus) that result from the conversion of individual or combined land parcels to a different land use(s), while providing applicants with quantitative information about their project's impact(s) on baseline water quality. DNREC strongly encourages the applicant/developer use this protocol to help them design and implement the most

effective BMPs. Please contact Lyle Jones at 302-739-9939 for more information on the protocol.

- **State-Endangered and State-Rare Species**

According to DNRECs current database, the following state-rare and Species of Greatest Conservation Need<sup>1</sup> (SGCN) have been documented adjacent to this project and could be utilizing the wetlands for nesting and foraging:

Scientific Name	Common Name	Taxon	State Rank	State Status	SGCN Tier	Federal Status
<i>Accipiter cooperii</i>	Cooper's hawk	Bird	S1B	E	Tier 1	
<i>Buteo platypterus</i>	Broad-winged hawk	Bird	S1B	-	Tier 1	
<i>Circus cyaneus</i>	Northern harrier	Bird	S1B/S4N	E	Tier 1	

**State Rank:** **S1**- extremely rare within the state (typically 5 or fewer occurrences); **S2**- very rare within the state (6 to 20 occurrences); **S3**-rare to uncommon in Delaware, **B** - Breeding; **N** - Nonbreeding; **SX**-Extirpated or presumed extirpated from the state. All historical locations and/or potential habitat have been surveyed; **SH**- Historically known, but not verified for an extended period (usually 15+ years); there are expectations that the species may be rediscovered; **SE**-Non-native in the state (introduced through human influence); not a part of the native flora or fauna., **SNR**-not yet ranked in Delaware, **SNA**-occurrences in DE of limited conservation value, \*\*of concern due to a restricted range; **SU**-Status uncertain within the state. Usually an uncommon species which is believed to be of conservation concern, but there is inadequate data to determine the degree of rarity.

**State Status:** **E** – endangered, i.e. designated by the Delaware Division of Fish and Wildlife as seriously threatened with extinction in the state pursuant to State of Delaware Code (7 Del. §601 *et seq.*) and implementing regulation (Title 7, 3900, 16.0 Endangered Species) ; n/a-plants are not included in Title 7.

**SGCN Tiers:** **Tier 1** Species of Greatest Conservation Need (SGCN) are those that are most in need of conservation action on order to sustain or restore their populations. They are the focus of the Delaware Wildlife Action Plan (DEWAP), which is based on

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<sup>1</sup> Species of greatest conservation need (SGCN) are indicative of the overall diversity and health of the State's wildlife resources. Some may be rare or declining, others may be vital components of certain habitats, and still others may have a significant portion of their population in Delaware. SGCN are identified in the Delaware Wildlife Action Plan (DEWAP) which is a comprehensive strategy for conserving the full array of native wildlife and habitats-common and uncommon- as vital components of the state's natural resources. Congress challenged the states to demonstrate comprehensive wildlife conservation. Delaware, along with all of the other states and provinces throughout the country are working to implement their wildlife action plans. This document can be viewed via the Division of Fish and Wildlife's website at <http://www.fw.delaware.gov/dwap/Pages/default.aspx>.

analyzing threats to their populations and their habitats, and on developing conservation actions to eliminate, minimize or compensate for these threats. **Tier 2** SGCN are also in need of conservation action, although not with the urgency of Tier 1 species. Their distribution across the landscape will help determine where DEWAP conservation actions will be implemented on the ground. **n/a**-plants are not addressed in DEWAP

In addition to the species noted above, there could be additional species of marsh nesting birds utilizing the surrounding wetlands.

### **Wildlife Habitat**

- This project will result in an increase in the percentage of impervious surface and introduce human disturbance which can degrade water quality and eliminate wildlife habitat. Also, cumulative impacts should also be considered given this project abuts “Canary Creek”, a housing development project that removed more than 50% of the forested buffer along the marsh and also sited roadways and stormwater management areas within 100 feet of the wetlands. The site plan provided for this project is blurry and as such it is difficult to determine how much buffered area exists between the project site and the surrounding marsh area to protect water quality and provide wildlife habitat. Buffers are an integral component of aquatic and wetland habitats, reducing the amount of sediments, pollutants, and other non-point source material that may affect the function and integrity of habitat and the condition and survivability of wetland dependent species. It is highly recommended that there is *at least* a 100-foot buffer between the edge of the wetlands and the project site. Consideration could then be given to improving the buffer by allowing succession within the buffer area or planting Delaware native trees, shrubs, grasses or wildflowers.

### **Additional information on hazardous waste sites**

- DNREC's Site Investigation and Restoration Section (SIRS) strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Environmental Site Assessment (including a title search to identify environmental covenants) and a Phase II or Facility Evaluation in accordance to Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA) and the HSCA Guidance Section 2, part 2.3 (page 2-1). While this is not a requirement under HSCA, it is good business practice and failure to do so will prevent a person from being able to qualify for a potential affirmative defense under Section 9105(c) (2) of HSCA.

Additional remediation may be required if the project property or site is re-zoned by the county or city.

Should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). SIRS should also be contacted as soon as possible at 302-395-2600 for further instructions.

### Additional information on air quality

- New homes and businesses may emit, or cause to be emitted, air contaminants into Delaware's air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:
  - Emissions that form ozone and fine particulate matter; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
  - The emission of greenhouse gases which are associated with climate change, and
  - The emission of air toxics.

Air emissions generated from commercial spaces include emissions from the following activities:

- Area sources such as painting, maintenance equipment and the use of consumer products like roof coatings and roof primers.
- The generation of electricity needed to support the commercial space, and
- All transportation activity.

Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) for the development were quantified. Table 2 represents the actual impact the development may have on air quality.

<b>Table 2: Projected Air Quality Emissions for Harbor Point</b>					
Emissions Attributable to Harbor Point (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NO <sub>x</sub> )	Sulfur Dioxide (SO <sub>2</sub> )	Fine Particulate Matter (PM <sub>2.5</sub> )	Carbon Dioxide (CO <sub>2</sub> )
Mobile emissions	3.2	3.3	0.1	*	2,039.3
Power emissions	*	0.8	2.9	*	434.3
Area Source emissions	2.1	0.2	0.2	0.3	8.7
Total emissions	5.3	4.3	3.2	0.3	2,482.3

(\*) Indicates data is not available.

- Note that emissions associated with the actual construction of the road, including automobile and truck traffic from working in, or delivering products to the site, as well as site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above.
- DNREC encourages sustainable growth practices that:
  - Control sprawl;
  - Preserve rural and forested areas;
  - Identify conflicting land use priorities;



- Encourage growth on previously developed sites and denser communities while at the same time protect our diminishing land base;
  - Coordinate transportation, housing, environment, and climate protection plans with land use plans; and
  - Demonstrate that communities can achieve the qualities of privacy, community, and contact with nature without degrading the natural environment or generating unacceptable environmental costs in terms of congestion, use of natural resources, or pollution.
- Additional measures may be taken to substantially reduce the air emissions identified above. These measures include:
    - Constructing with only energy efficient products. Energy Star qualified products are up to 30% more energy efficient. Savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of energy efficiency translates into a percent reduction in pollution. The Energy Star Program is excellent way to save on energy costs and reduce air pollution.
    - Offering geothermal and/or photo voltaic energy options. These systems can significantly reduce emissions from electrical generation, and from the use of oil or gas heating equipment.
    - Providing tie-ins to the nearest bike paths and links to any nearby mass transport system. These measures can significantly reduce mobile source emissions. For every vehicle trip that is replaced by the use of a sidewalk, a bike path or mass transit, 7 pounds of VOC and 11.5 pounds of NOx are reduced each year.
    - Using retrofitted diesel engines during construction. This includes equipment that are on-site as well as equipment used to transport materials to and from site.
    - Using pre-painted/pre-coated flooring, cabinets, fencing, etc. These measures can significantly reduce the emission of VOCs from typical architectural coating operations.
    - Planting trees in vegetative buffer areas. Trees reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, thereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the development. The applicant should submit a plan to the DNREC DAQ which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into this project.

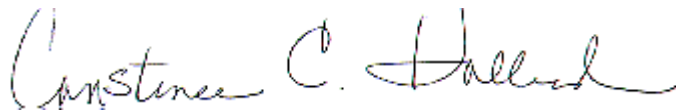
Delaware State Fire Marshall's Office – Contact Duane Fox 739-4394

- Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: [www.statefiremarshal.delaware.gov](http://www.statefiremarshal.delaware.gov), technical services link, plan review, applications or brochures.

**Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.**

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

A handwritten signature in blue ink that reads "Constance C. Holland". The signature is fluid and cursive, with the first name "Constance" being more prominent than the last name "Holland".

Constance C. Holland, AICP  
Director, Office of State Planning Coordination

CC: City of Lewes  
Sussex County